PROFILE
STRONGWELL NEWS & APPLICATIONS • SPRING 2024

Case Study: Sheet Piling

Shored Up for Piling

Hunting Island is a barrier island off the coast of South Carolina and possesses one of the highest rates of erosion for any coastline in the United States. In 2007, four steel sheet piling groins were installed as part of an erosion prevention measure.

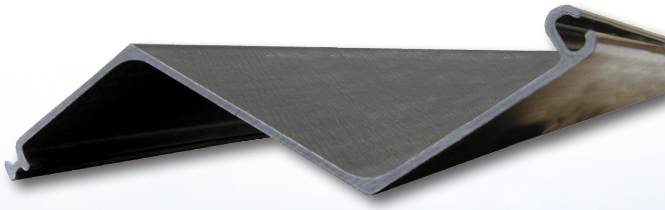
Thirteen years later, the groins had to be replaced due to severe corrosion and decay. CMI Limited Co. worked with the South Carolina Department of Parks, Recreation & Tourism and Coastal Science and Engineering, Inc. to specify, engineer, design, and install the strongest FRP sheet piling on the market, CMI's UltraComposite™ UC-95 FRP Sheet Piling.

This product is exclusively manufactured by Strongwell and provides the highest levels of corrosion resistance in saltwater environments while offering excellent properties of weight-to-strength, drivability, and width.

A total of 950 lineal feet of sheet piling was installed in less than sixty days due to the time constraints around turtle nesting season.

FRP Sheet piling was installed in pairs with processes of beach nourishment running concurrently. This renourishment process included more than 1.5 million cubic yards of additional sand being added to the beach as a vibratory hammer drove sheet pilings to depths ranging up to 14 feet.

Upon installation, the designers, engineers, residents, and park owner were pleased with the result of this massive shorefront restoration project. ●



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Case Study: Custom

FRP Strengthens Freight Rail Shipping for Agricultural Commodities

Since 2021, the United States has been exporting record amounts of agricultural products to Asia, according to figures from the U.S. Department of Agriculture. The most common commodities include grain, soybean meal, malt, barley, salt, potash, corn gluten meal, lime, fertilizer, soda, ash, clay, and distillers' grains. These commodities typically originate within the Midwest and are transported to locations on the Gulf Coast and in the Pacific Northwest to be loaded on shipping vessels.

Freight rail is the preferred method of land transport for producers and processors. As a result, Wabtec Corporation offers multiple specialty components, including hatch covers, to outfit trough-style freight cars. Wabtec hatch covers, which are manufactured from aluminum and fiberglass, are outfitted on covered hopper cars for producers and processors to load, store, and unload agricultural products.

Wabtec and Strongwell recently collaborated on an Association of American Railroads (AAR)-approved sealed hatch cover system outfitted with Strongwell's Fiberglass Reinforced Polymer (FRP). With better overall durability and corrosion resistance, FRP reduces the total hatch cover weight by almost 20 percent compared to its aluminum counterpart.

Within their hatch cover system, the pultruded panels can be easily fabricated to any length. The panels measure 32" wide to cover a 24" opening. The four-inch overlap on each side ensures a tight weather-resistant seal between the cover and coaming of the car. ●

Literature Updates:

- *DURAGRATE® Brochure (I+M)*
- *DURADEK® Brochure (I+M)*
- *DURAGRID® Brochure (I+M)*
- *SAFRAIL™ Brochure*
- *SAFRAIL™ Ladder & Cage Brochure*
- *Availability List (I+M)*
- *STRONGIRT® Installation Manual*
- *Design Manual Sections:*
  - *Section 5 (I+M)*
  - *Section 6 (I+M)*
  - *Section 13 (I+M)*
  - *Section 19 (I+M)*

Visit www.strongwell.com for the latest resources.

Strongwell New Hires

Joey Sword
Human Resources Assistant - Bristol

Joey manages the HR portion of the relationship with Virginia Operations contract team members and agencies and assist with other HR tasks and projects. Joey retired from her role as a Human Resources Director for the Commonwealth of Virginia in March 2022. Joey has extensive human resources experience in both the private and public sectors.

Joshua Rask
Quality Manager - Chatfield

Joshua is an accomplished quality professional of 12 years who enjoys using his skills to grow and improve processes and individuals. He studied Machine Tool Technics for two years at Western Technical College in La Crosse, WI, and was a machinist for six years before breaking into quality. His passion is learning, continuous improvement, and data analytics. He also enjoys automating and linking Excel sheets to simplify tasks.

Matt Chester
Inside Sales / Fabrication Estimator - Chatfield

Matt attended the University of Minnesota, Carlson, earning a bachelor's degree in business management and marketing. Matt was previously a part of Masterson Staffing, serving as Strongwell-Chatfield's on-site hiring manager for the past four years.

Camille Balaguer
Corporate Credit / Accounts Receivable Analyst

Camille handles the Accounts Receivable collection process and maintains customer accounts corporately. Prior to her time at Strongwell, Camille worked as an Accounts Receivable Analyst in the private sector and lead teams in the higher education industry. She holds a bachelor's degree in accounting from Western Carolina University and a master's degree in management and leadership from Webster University. She is currently working towards earning her CPA.

Laura Siewny
Corporate Accounts Associate

Laura holds a Bachelor of Science in Environmental Studies from the University of Maine at Machias. Prior to joining Strongwell, Laura worked as a Data Entry Specialist for a national title company.

Strongwell Promotions

Carrie Bowers
Virginia Operations Process Engineering Manager

Lonnie Bullins
2nd Shift Supervisor - Highlands

Amos Hanson
Facilities & Maintenance Supervisor - Chatfield

Jason Reike
Engineering Coordinator - Chatfield

Kat Bicknese
Grating Flow Line Facilitator - Chatfield

For full bios, please subscribe to our monthly digital newsletter - visit www.strongwell.com/godigital OR scan this QR code:

Case Study: EXTREN®, DURAGRID®, STRONGRAIL®, & SAFRAIL™

FRP Lands on Top

A 6,000-acre facility located in north central, Virginia, offers year-round activities, lodging, and resort options for those interested in a plethora of family vacation options.

Within the 6,000 acres of resort property, resides a massive, expansive indoor/outdoor aquatics center for those looking for a pool day.

In 2020, the waterpark needed to replace a 50' wooden stair tower located near the lazy river attraction due to ongoing durability issues with wood. The five-story stair tower serves as the only access point for multiple waterslide options.

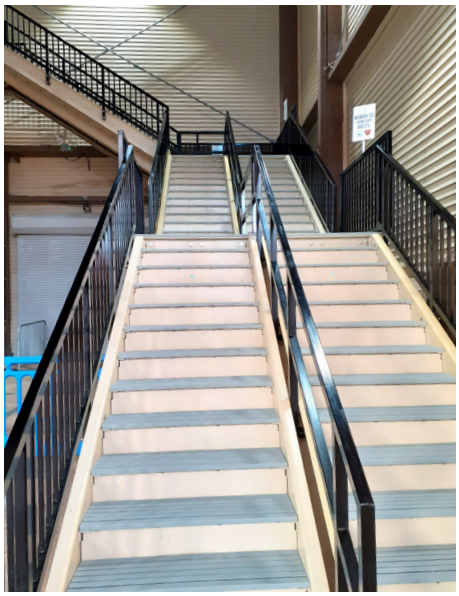
The owner of the facility needed the new structure to be installed and fabricated onsite with lightweight and corrosion-resistant materials. To accomplish this, EXTREN® Series 525 channels, angles, wide flanges, and I-beams were used for the tower structure.

All five landings and accompanying stair treads were outfitted with 1" DURAGRID® T-1800 panels with 18% open space ensuring water flow and light allowance. Panels were coated with slip-resistant grit safe for bare feet.

2" square STRONGRAIL® handrails were installed to offer fall protection support with pickets 1" on center and 2" square SAFRAIL™ was painted to match and installed in the middle of the stair structure to create a traffic divider.

All mechanical connections were secured with stainless steel hardware as an added preventative corrosion measure.

The owner, construction team, and park guests have all commented on the aesthetic and overall operational improvement of the structure. ●



Looking for PDH Credits? Learn About FRP!

Would you and your team like to learn more about: the pultrusion process, pultruded FRP, how to specify, or take a deep dive into something more specific?

We're here to help!

Strongwell can offer Professional Development Hours (PDH) for free presentations offered by our experienced Sales Directors and Structural Engineers, and topics can be customized to meet your need.

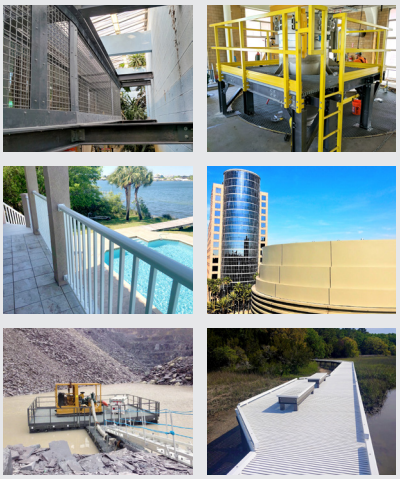
Contact us to schedule: info@strongwell.com

Let Us Promote Your Project

Did you use Strongwell products in a project you want to showcase? We are always looking for applications that demonstrate the benefits of pultruded FRP and show how versatile our products are.

To get started, fill out the form here:

www.strongwell.com/submit-case-study



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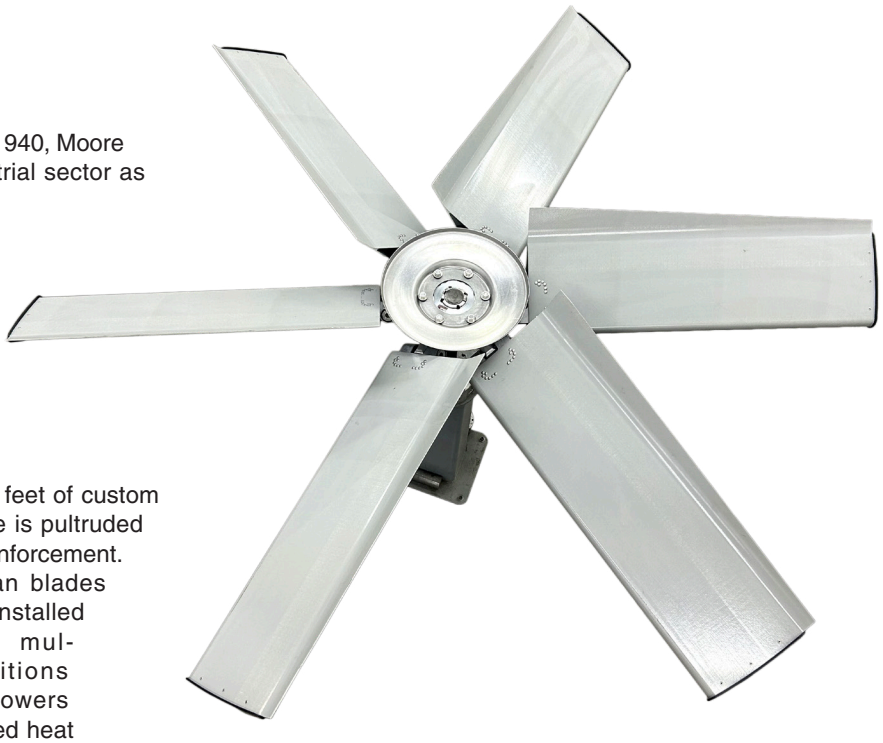
What's in this Issue:

*The **Profile Newsletter*** is published by the Strongwell Corporate Marketing Department. To subscribe to the e-newsletter, please visit **www.strongwell.com/godigital**. Previous editions of *The Profile Newsletter* may also be found online at **www.strongwell.com**. | Editor: Barry Myers Production/Reporting: Brian Godwin & Te-Kai Shu

Case Study: Custom Composites Draw All Fanfare



As a leading manufacturer of efficient axial flow fans since 1940, Moore Fans has been a major player and pioneer within the industrial sector as a leading provider of fans for air-cooled heat exchangers, cooling towers, and radiators.

The company offers three classes of high-efficiency fans for various air movement applications. To meet customer specifications and expand product offerings, the manufacturer looked for a composites manufacturer to supply blades offering high strength and anti-corrosion properties for certain heat exchange installations. These blades are used in fans ranging from 3 feet to 18 feet in diameter.

Since 2021, Strongwell has produced thousands of lineal feet of custom fiberglass reinforced fan blades for Moore Fans. Each blade is pultruded with a vinyl ester resin paired with a stitched mat as added reinforcement.

These fan blades have been installed throughout multiple conditions of cooling towers and air-cooled heat exchangers within challenging environments, including, but not limited to, those requiring ATEX certification.

Prior to launch, this custom pultruded profile endured thousands of hours of product testing to ensure the blades were capable of enduring high cycles of fatigue throughout a wide range of temperatures. In these temperature tests, temperatures reached up to 180 degrees F.

By offering FRP fan blades, Moore Fans was able to grow its overall industrial airflow solution market share.